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Phyllosticta Amaranthi, E. & K.—On leaves of *A. retroflexus*, Garden City, Ks., Aug. '84. On reddish brown (2—4 mm.) spots with a dark, slightly raised border. Perithecia 6—12 on a spot, epiphyllous, erumpent, rather large; spores oblong-elliptical, 2-nucleate, 9—11 x 3—5 *u*. Differ from *P. Chenopodii, West.* in its larger perithecia and spores and in the different character of the spots.

Phyllosticta abortiva, E. & K.—On leaves of *Menispermum Canadense*, Manhattan, Ks., Nov. '84. Spots brown, suborbicular, (¼—1 cm.) with a definite darker colored but scarcely raised margin. Perithecia innate, punctiforin, minute, black and quite thickly scattered over the spots, visible on both sides of the leaf; spores imperfectly developed.

NEW FUNGI FROM IOWA.

BY J. B. ELLIS AND E. W. HOLWAY.

The species here described were collected by Mr. Holway in the vicinity of Decorah, Iowa, mostly during the summer and fall of 1884.

Hypocrea cubispora, E. & Hol.—Stroma tuberculiform, obconic, subplicate below, about 1 cm. broad and ¾ cm. high, lemon yellow within and without, surface punctate with the black ostiola; perithecia peripheric, globose; asci cylindrical containing 8 sub ubical, dark olive or brownish black, 2-nucleate, 4—6 x 3—4 *u*, sporidia, some of which are obscurely uniseptate. On an old log, August.

Diatrypella Populi, E. & Hol.—Perithecia cartilaginous, ovate or subangular by mutual compression (½—¾ mm.) closely packed in an orbicular lens-shaped stroma, 2—3 mm. in diam., dark brown outside, dirty white within and seated on the surface of the inner bark; ostiola short, stout, tips obscurely 4-cleft and united in an obscure black disk or piercing the epidermis separately; asci long clavate, 100—115 x 15 *u*; sporidia cylindrical, yellowish, curved, 10—12 x 1½—2 *u*. The surface of the wood is blackened except directly under the stroma where it retains its light color. On dead limbs of Populus, Aug. 1883.

Valsa Menispermi, E. & Hol.—Perithecia circinating in a cortical stroma without any circumscribing line, 6—10 in number and about ¼ mm. in diam., with membranaceous, coarsely cellular walls; ostiola very short, united and concealed in a circular disk ½—⅛ mm. in diam. and entirely covered by the epidermis through which its outline is seen as a small black circle with a black dot in the center; asci clavate, 70 x 12 *u*; sporidia crowded, cylindrical, yellowish, curved, 15—20 x 4—6 *u*. On stripping off the epidermis the perithecia sometimes adhere to it and sometimes remain buried in the surface of the inner bark, Closely allied to *Valsa ambiens*, Fr., but differs in its larger sporidia and the different nature of its permanently covered disk. On dead stems of *Menispermum Canadense*, October.

PEZIZA (HUMARIA) FUSCOCARPA, E. & Hol.—Sessile, orbicular, 3—4 mm. in diam., outside pruinose-tomentose and olivaceous yellow, disk concave, olive-black, margin incurved; asci linear, 65—80 x 4½—5*u*; paraphyses filiform; sporidia unisertaie, ovate-oblong, brown, 2-nucleate, 7—8 x 3—3½ *u*. On an old log, Sept. 1882.

CERCOSPORA RANUNCULI, E. & Hol.—On leaves of *Ranunculus repens*, July, 1884. Forming brown indefinitely limited patches on the under side of the leaves which become dirty-yellow above, without the formation of any well defined spots. Hyphæ in scattered tufts, brown, continuous, abruptly undulate, crooked and subnodulose above, 75—90 x 4—4 *u* ; conidia slender, nucleolate, becoming 4—6-septate, 70—85 x 3—4 *u*.

CERCOSPORA VICIÆ, E. & Hol.—On leaves of *Vicia sativa*, Chicasaw Co., Iowa. On light brown, purplish bordered spots and irregularly shaped, dead areas of the leaf. Hyphæ densely tufted, continuous, brown, entire or slightly denticulate above, short (25—30 x 3—4 *u*); conidia cylindrical, granular, becoming 3-septate, 30—40 x 3—3½ *u*. Differs from *C. Lupini*, Ck. and *C. Phaseolorum*, Ck., in its definitely limited spots. The former also has the hyphæ branched much as in *C. racemosa*, *E. & M.*

CERCOSPORA OMPHAKODES, E. & Hol.—On leaves of *Phlox divaricata*, var. *Laphami*. Aug., 1884. Amphigenous but more abundant below, on round (2—9 *u*) brown spots which are mostly included in pale-brown dead areas of the leaf. Hyphæ brown, continuous or faintly septate, abruptly bent, subgeniculate and imperfectly dentate above, 60—75 x 3 *u*; conidia brownish, cylindrical, mostly about 50-60 x 3—3½ *u*, faintly 5—6 septate.

The specific name alludes to the tardy maturing of the conidia which remain for some time granular and faintly 1—2-septate.

CERCOSPORA ANTIPUS, E. & Hol.—On leaves of *Lonicera flava*, August. Amphigenous but mostly hyhophyllous, on round (3—4 mm.) spots, dirty gray above and ferruginous-brown below, with a rather broad, raised, dark colored border. Hyphæ fasciculate, brown undulate and subgeniculate, imperfectly toothed above; conidia cylindrical or clavate-cylindrical with a pale yellowish tint, becoming faintly 3—5-septate, 30—45 x 2½—3 *u*. *Sphærella Clymeniæ*, Sacc. occurs on the upper surface of the spots.

CERCOSPORA GALII, E. & Hol.—On leaves of *Galium aparine*, July. Mostly hypophyllous, on dead grayish-brown definitely limited spots and areas of the leaves. Hyphæ simple, continuous, brown, undulate and geniculate above, 35—50 x 3—4 *u*, forming dense tufts arising from a tuburcular base ; conidia cylindrical, continuous (becoming septate), brownish, nucleolate, 30—40 x 3½ *u*., nearly straight.

CERCOSPORA GRANULIFORMIS, E. & Hol.—On leaves of *Viola cucullata*. July. Amphigenous, on large (1 cm.) round, indefinitely limited brown spots. Hyphæ short (15—25 x 3 *u*) continuous, brown, nearly straight, obtuse and entire at first, becoming subundulate and somewhat toothed above, densely compacted into small (75 *u*) sphæriæform tufts scattered quite thickly over the spots and resembling minute perithecia, brownish at first but at length black, conidia cylindrical, straight, brownish, 1—3-septate, 17—85 x 2½—3 *u*. Allied to *C sphæriæformis*, Ck., but quite different from *C. Violæ*, Sacc.

CERCOSPORA MONOICA, E. & Hol. —On *Amphicarpæa monoica*, July. Epiphyllous, forming clusters of minute, snuff-brown tufts on brown, dead spots with a yellow shaded border, and on the green parts of the leaf which soon become yellowish and finally brown. Hyphæ densely tufted, pale brown, continuous, abruptly undulate and denticulate above, 35 x 2½*u* ; conidia slender, nearly straight, yellowish, granular becoming indistinctly 3—8 septate. Differs from *C. tuberosa, E. & K.* (which is the same as *C. glaucescens*, Winter in Rabh. F. Eur. 3080) in its epiphyllous growth, larger tufts of hyphæ and in its shorter, narrower, and less distinctly septate conidia.

RAMULARIA ASTRAGALI, E. & Hol.—On *A. Canadensis*. July. Spots 2—4 mm. in diam., lead colored below, brown above (3—6 mm.); hyphæ hypophyllous, fasciculate, continuous or faintly septate, nearly hyaline but with a faint yellowish tinge, undulate and subgeniculate above, 80—112 x 8—4 *u*., conidia oblong-elliptical, uniseptate, hyaline, 15—22 x 7—9 *u*.

SEPTORIA BRUNELLÆ, E. & H.—On leaves of *Brunella vulgaris*. July. Spots dark rusty brown. Sharply defined with a narrow, raised border; perithecia thickly scattered over the upper surface of the spots, black, slightly prominent, 100—130 *u* in diam., spores lenear-clavate, subfuscous, multiseptate, nearly straight, 40—75 x 1½ —2 *u*.

SEPTORIA PACHYSPORA, E. & Hol.—On leaves of *Zanthoxylum Americanum*. August. Perithecia epiphyllous, black, (100—130 *u*,) on snow white, thin, small (1—2 mm.) subanglar or nearly round spots surrounded by a broad, purplish shaded border; spores arcuate-fusiform, 4—6 septate, 35—60 x 3 *u*, a greenish yellow tinge.

GYMNOSPORIUM HARKNESSIOIDES, E. & Hol. On leaves of *Phryma Leptostachya* and on various other living leaves. July, 1884. Spores also from Kansas on leaves of Rosa lucida, by Dr W. A. Kellerman, Nov. 1884. Spores superficial and naked, collected in little heaps appearing like small black specks scattered sparingly over both sides of the leaf but more abundantly below, elliptical 20 x 12 *u*, dark brown with an obtuse, short, hyaline apiculus at each end.

It is quite probable that these are only the spores of some other fungus accidentally scattered on the leaves, and it is given here more especially to call attention to it in order to ascertain its true character.